August 14, 2014

Recommendations for Independent Review of the San Jacinto River Waste Pits Superfund Site (SJRWPSS), provided on behalf of the Port of Houston Authority

On behalf of the Port of Houston Authority (PHA), HDR, Inc. has performed technical reviews of numerous documents for the Site. This memorandum summarizes recommended issues for an independent review of the Site. More detailed comments are provided in the comments on the Draft Final Interim Feasibility Study Report (FS) submitted on behalf of PHA in April 2014. It is assumed that the independent review will consider the degree to which the FS incorporates prior Army Corps of Engineers comments and recommendations, as well as prior comments by all parties. Existing land and water uses, expected future flood conditions and elevations, as well as permitted uses of the land and waters of the Site and area should be considered. The following scope is suggested:

- *The FS is developed around the area-averaged concentrations of COCs rather than interpolation of sampling data. Does the independent review concur with this basis for designating areas for remediation?*
- *Given the failure of some parts of the TCRA cap in the past, the FS should include monitoring and maintenance requirements for the TCRA cap. The independent review should identify any recommended enhancements to the TCRA cap. Contingent improvements that would be triggered by any future failures of the TCRA cap might also be identified.*
- *Because Monitored Natural Recovery (MNR) is an important aspect of all the remedial alternatives, its assumptions and uncertainties should be critically reviewed; are the limitations of the Chemical Fate & Transport modeling adequately reflected in the FS document? Numerous questions about the upstream loading assumptions, stream morphology upstream of the Site, historical and future flow rates for simulations, measured and projected sedimentation rates, areas of potential erosion exposing contamination, and duration and assumptions for future conditions have been raised and should be considered in the independent review.*
- *Few specific institutional controls have been identified in the FS. What institutional controls (e.g. deed restrictions, notices, buoys, signs, fencing, patrols, and enforcement activities) should be incorporated into the remedial alternatives for the TCRA area and surrounding waters and lands? If ICs are judged now or found later to be ineffective, what remedial activities might be triggered to ensure that the selected remedy is protective?*
- *Remedial alternatives include monitored natural recovery (MNR) as an essential element.*
  - *Is the projected attenuation realistic?*
  - *How should attenuation be monitored?*
  - *If the MNR is found to be less protective than projected, what contingent remedial measures are needed to ensure protectiveness? E.G. In situ capping or stabilization, or "hot spot" removal.*
- *The FS claims that any disturbance of waste will create substantial release of contaminants; does the independent review agree with that aspect of the FS interpretation? More specifically, are solidification and stabilization technologies (and remedies that incorporate these technologies) objectively and appropriately considered and assessed for application to the Site? For example, the FS claims that removal, solidification, and placing wastes again beneath the TCRA cap has great*

Henningson, Durham & Richardson Architecture and Engineering, P.C.
in association with HDR Engineering, Inc.
One Blue Hill Plaza, 12th Floor
P.O. Box 1509
Pearl River, NY 10965
Phone: (845) 735-8300
Fax: (845) 735-7466
www.hdrinc.com

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uncertainty as to implementation and that such management of the waste will result in significant releases; does the independent review agree with this interpretation? Are the costs, construction times, and uncertainties of solidification and stabilization as described in the FS realistic?

- *Among the alternatives, dredging is limited to within the TCRA cap, shallow water (less than 10 ft.), and, in Alternative 6N, the few locations where the PCL is exceeded. Is the use of dredging technologies appropriately limited to these remedial alternatives?*
- *Is the FS emphasis on the limitations and potential adverse impacts of the more expensive alternatives, as contrasted with the lower cost MNR and the existing TCRA cap, balanced and objective? The FS may over-emphasize the certainty and effectiveness of MNR and the TCRA cap, and the uncertainty and limitations of the more costly waste removal, solidification/stabilization, and/or offsite disposal alternatives.*
- *Given the diverse uses of water and shoreline resources (industrial, contact recreation, wildlife, wildlife spawning) near the Site, to what extent are uses protected by the alternative remedial alternatives?*
- *What reviews will be required for the Remedial Design, and Long-Term Operations, Maintenance and Monitoring (OM&M) associated with each remedy?*
- *Although sustainability and worker safety are important aspects for the Site and region to consider, they are not part of USEPA's nine remedy evaluation criteria. Is the emphasis on worker safety, sustainability and community impact concerns (traffic, air emissions, and greenhouse gas production, particularly during remedy construction) appropriate under the short-term effectiveness / impact criteria?*
- *The independent review should identify aspects of remedial measures that would be more appropriately labeled as "interim remedial measures," rather than as elements of a permanent remedy. Significant uncertainties remain as to how effective MNR, the TCRA cap, and institutional controls will be. If the independent reviewers agree that these measures are uncertain, then contingent remedial alternatives should be identified in the remedy selection documentation.*

Any questions concerning these comments should be communicated to Linda Henry, Port of Houston Authority.

Sincerely,

Michael P. Musso

Michael Musso, P.E., M.S., MPH
Senior Project Manager

Thomas Pease

Thomas Pease, P.E., PhD
Senior Professional Associate

cc: Neil McLellan